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RemarksInterview Summary:

We greatly appreciate the courtesy extended by Examiner Cangialosi during the February 16, 2006 personal interview with Applicant's representative, Steve Stewart.

By way of a summary, we discussed various sections of the specification including: "Method for Embedding Subliminal Registration Patterns into Images and Other Signals," starting on page 76 (paragraph [0471] of the published version of the specification, US 2002-0118831 A1) and the "Rings to Knots," starting on page 48 (paragraph [0324] of the published version of this specification).

Applicant's representative discussed how the first section describes, e.g., "subliminal graticules" that can be used to determine registration for other information and/or orient media objects such as images and audio, and how the second section describes, e.g., determining orientation, rotation and scale associated with various patterns.

These sections, among others in the specification, describe, e.g., registration, calibration and orientation of media objects and steganographic signals.

Applicant's representative also discussed how the current claim scope has changed – in many cases becoming broader – relative to the originally filed claims, such that an interference is no longer deemed appropriate.

We appreciate the Examiner's indication in the Interview Summary Form that the words "registration" and "calibration" have support in the specification.

Specification Support for "Distortion"

Applicant's representative did not bring an electronic copy of the specification for word searching during the interview and was not then able to quickly locate the exact word "distortion" in the body of the specification using a paper copy of the application. (The word was identified in the title, abstract and Appendix A title, but not quickly found in the body of the specification.) We apologize for any inconvenience this may have caused.

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The Examiner performed a word search of an electronic copy during the interview but did not find the exact word "distortion" in the body of the specification. In view of Applicant's electronic word searching after the interview we are not sure why this happened.

To supplement the interview and to clarify the record we have identified several examples in the body of the specification where the word "distortion" is used. These examples were found by word searching the published version of the subject application (US 2002-0118831 A1) via the United States Patent and Trademark Office's public patent search website. We have also provided documentation for each of these examples showing corresponding support in a priority and parent patent, U.S. Patent No. 5,636,292.

- "Likewise, appreciable geometric distortion of any image will clearly distort rings but they can still maintain gross symmetric properties." (*emphasis added*). See paragraph [0323] of the published version of this specification (US 2002-0118831 A1), attached hereto as Exhibit A-1; see also, Exhibit A-2, attached hereto, showing support for this sentence in priority parent Patent No. 5,636,292, Col. 45, lines 61-63; *see also* page 48, lines 1-2 of the specification.
- "While noise-induced aberrations in decoding can be dealt with--to some degree--by analyzing large portions of the signal, such aberrations still place a practical ceiling on the confidence of the process. Further, the villain that must be confronted is not always as benign as random noise. Rather, it increasingly takes the form of human-caused corruption, distortion, manipulation, etc." (*emphasis added*). See paragraph [0183] of the published version of this specification (US 2002-0118831 A1), attached hereto as Exhibit B-1; *see also*, Exhibit B-2, attached hereto, showing support for this sentence in priority parent Patent No. 5,636,292, Col. 19, line 64 - Col. 20, line 3; *see also* page 21, lines 1-5 of the specification.

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- "FIG. 15 shows how a signature signal can be preprocessed to increase its robustness in view of anticipated distortion, e.g. MPEG." (*emphasis added*). See paragraph [0043] of the published version of this specification (US 2002-0118831 A1), attached hereto as Exhibit C-1; see *also*, Exhibit B-2, attached hereto, showing support for this sentence in priority parent Patent No. 5,636,292, Col. 4, lines 44-47; *see also* page 4, lines 12-13 of the specification.

Formalities:*Claim Status*

Claims 34-36, 39 and 48-53 are pending in the present application. Dependent claims 48-53 are newly presented. Claims 32 and 33 are canceled herein without prejudice to the subject matter recited therein and without conceding the merits of the outstanding rejections. Indeed, these claims are canceled merely to simplify issues for this amendment. The remaining independent claims -- claims 34 and 39 -- are amended herein. Many of these amendments are intended to broaden their scope.

In the case of claim 34, the scope has also been changed to include the term registration, but not distortion. A plural-bit watermark is also recited. (We note, however, that a registration process may be useful to help resolve signal distortion.)

Claim 39 has been broadened, e.g., by deleting the terms "affine geometric." The claim scope has also been directed to include an act of "determining a calibration".

Rejections

Claims 34-36 and 39 stand rejected as failing to comply with the written description requirement as set forth in 35 U.S.C. § 112, first paragraph. We respectfully traverse this rejection. Written description support for the pending independent claims is shown in the following tables. Of course, the tables are not an exhaustive listing, as additional support can be found in other application areas as well. Thus, the listed passages should not be viewed as limiting.

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Table 1: Claim 34

Claim Elements	Specification Support
A method for extracting a watermark from data containing a watermark comprising:	See, e.g., page 97, lines 15-24. See also the many decoding sections, e.g., page 20, line 1 et seq.; page 39, et seq., etc.
receiving data containing a watermark including a plural-bit message and at least one steganographic component;	See, e.g., page 48, line 6 et seq.; page 76, line 17, et seq.; and Appendix A and Appendix C.
with reference to the steganographic component, determining a registration associated with the data or component; and	See, e.g., page 97, lines 15-24, and Fig. 29A; see also, e.g., page 76, line 17, et seq.; page 76, lines 32-35, page 77, lines 1-15, etc., and Appendix C.
extracting the plural-bit message of the watermark with at least consideration of the registration.	See, e.g., page 97, lines 15-24; see also page 48, line 6 et seq.; page 76, line 17, et seq.; and Appendix A and Appendix C. See also the many decoding sections, e.g., page 20, line 1 et seq.; page 39, et seq., etc.

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Table 2: Claim 39

Claim Elements	Specification Support
A method of extracting a watermark from compressed data containing a watermark comprising:	See, e.g., page 97, lines 15-24. See also the many decoding sections, e.g., page 20, line 1 et seq.; page 39, et seq., etc.
receiving compressed data containing a watermark in the form of n by n blocks, which data has been subjected to distortion;	See, e.g., at page 48, line 6 et seq.; page 76, line 17, et seq.; and Appendix A and Appendix C. The term "distortion" finds support, e.g., at page 48, lines 1-2; page 21, lines 3-4; and page 4, lines 12-13.
transforming the data;	See, e.g., page 97, lines 15-24; see also page 76, line 17, et seq.; and Appendix C.
determining a calibration of the transformed data based on characteristics of a steganographic calibration component associated with the watermark; and	See, e.g., page 48, line 1 et seq.; page 97, lines 15-24 and Fig. 29A; page 76, line 17, et seq.; and Appendix C, etc.
extracting the watermark from the transformed data based at least in part on the calibration.	See, e.g., page 97, lines 15-24. See also the many decoding sections, e.g., page 20, line 1 et seq.; page 39, et seq.; and Appendix C, etc.

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Request for Reconsideration

We respectfully submit that the application provides ample written disclosure for the pending claims. And we respectfully request reconsideration and withdrawal of all outstanding rejections.

Information Disclosure Statement:

An Information Disclosure Statement is filed concurrently herewith. Consideration of the information disclosed therein is respectfully requested.

Conclusion:

The application is believed to be in condition for allowance. Nevertheless, the Examiner is respectfully invited to contact the undersigned at 503-469-4685 with any questions.

Date: February 22, 2006

Respectfully submitted,

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By



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Attachments: Exhibits A-1, A-2, B-1, B-2, C-1 and C-2
Information Disclosure Statement and Form 1449

Exhibit A-1

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Aug. 29, 2002

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